

Serial No. 10/625,304
67010-039; H2624-SUN**REMARKS**

Reconsideration and allowance are respectfully requested. Claims 1-13 stand rejected. Applicant has amended claims 1, 6 and 9 and has cancelled claims 3, 4, 5 and 10 without prejudice. Consequently, claims 1-2, 6-9, and 11-13 are pending upon entry of this Amendment. No new matter has been added.

§ 102 rejections

Claim 1 was rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,144,735 to Stark ("Stark"). Applicant has incorporated the limitations of claim 4 into claim 1, rendering the rejection moot. Withdrawal of the rejection is therefore respectfully requested.

Claims 1, 5, 7, and 8 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 3,517,238 to Lake ("Lake"). Applicant respectfully traverses this rejection. Applicant has incorporated the limitations of claim 4 into claim 1, rendering the rejection moot. Withdrawal of the rejection is respectfully requested.

§ 103 rejection

Claims 2-4, 6 and 9-13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Lake in view of U.S. Patent No. 4,742,259 to Schaefer et al. ("Schaefer"). Applicant respectfully traverses this rejection.

Applicant has incorporated the limitations of claim 4 into independent claim 1 and the limitations of claim 10 into independent claim 9. The remarks below will therefore be directed to current independent claims 1 and 10 and the claims depending therefrom.

The Office Action stated that Lake and Schaefer show all of the limitations of claim 4 and 10 (p. 4) without elaboration. Applicant respectfully notes that nothing in either Lake or Schaefer suggests a support sleeve and end ring made of the same material or a support sleeve alloyed to have a higher mechanical strength than an end ring. Both Lake and Schaefer assume that the outer and inner rings in their respective structures are made from completely different materials (see, e.g., Lake at col. 3, lines 37-61 and Schaefer at col. 4, lines 1-6).

Also, Lake specifically teaches away from the claimed invention by requiring its outer ring 20, which the Office Action asserts is the same as the claimed support sleeve, to have a

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"very high modulus of elasticity" (and therefore low mechanical strength) to act as a safety ring for an inner ring 18 having a low modulus of elasticity (col. 3, lines 23-33). In other words, Lake requires its outer ring 20 to have a low mechanical strength so it can elastically cooperate with the inner ring 18 to prevent plastic deformation of the inner ring during severe loadings and maintain contact between all of the parts in the end ring assembly 14 (col. 2, lines 49-55).

"If the proposed modification of combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious." MPEP § 2143.02. Modifying Lake to incorporate an outer ring 20 having a higher mechanical strength than the inner ring 18 would clearly change the principles of operation taught by Lake because Lake explicitly requires its outer ring 20 to have a much higher modulus of elasticity than the inner ring to ensure that the entire end ring assembly 14 is fully elastic even at high loadings, thereby allowing the outer ring 20 to deform as the inner ring deforms. Using a material having a high material strength in the outer ring like the claimed invention would defeat this purpose because a higher strength outer ring would counteract stress in the inner ring rather than deform elastically in response to the stress as taught in Lake. Thus, one of ordinary skill in the art would have been led away from alloying a support sleeve to have a higher mechanical strength than an end ring based on Lake's teachings.

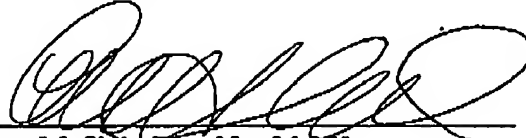
Because nothing in either Lake or Schaefer remotely suggests a support sleeve and end ring made of the same material or a support sleeve alloyed to have a higher mechanical strength than an end ring, the Office Action fails to establish a *prima facie* case of obviousness. Withdrawal of the rejection is respectfully requested.

All objections and rejections having been addressed, it is respectfully submitted that the present application is in condition for allowance, and a Notice to that effect is earnestly solicited. The Commissioner is authorized to charge Deposit Account No. 50-1482 in the name of Carlson,

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Gaskey & Olds \$420 for a two-month extension of time and for any additional fees or credit the account for any overpayment.

Respectfully submitted,



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CERTIFICATE OF FACSIMILE

I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office, (703) 872-9306, on August 17, 2004.


Beth A. Beard